Serial Number: 10/050,237

Filing Date: January 15, 2002 Title: METHOD AND APPAI Assignee: Intel Corporation

Title: METHOD AND APPARATUS FOR SEARCHING FOR A BASE STATION USING AN ADAPTABLE SEARCH WINDOW

REMARKS

In response to the Office Action dated 26 January 2005, the applicant requests reconsideration of the above-identified application in view of the following remarks. Claims 1-31 are pending in the application, and are rejected. Claim 24 will be amended, and claim 30 will be canceled, upon entry of the present amendment. No new matter has been added.

Rejection of Claims Under §102

Claims 1, 4-5, 7, 9-13, 15, and 24-29 were rejected under 35 USC § 102(e) as being anticipated by Rick et al. (U.S. 6,738,438 B2, Rick). The applicant respectfully traverses.

Rick issued on 18 May 2004, which is after the filing date of the present application. The applicant does not admit that Rick is prior art, and reserves the right to swear behind Rick at a later date.

Independent claim 1 recites "a mobile communicator" comprising "a search receiver to search for a base station using a search window size that adapts over time based on a changing channel condition between the base station and the mobile communicator."

Rick relates to a "parameter estimator with dynamically variable search window." Rick does not show the elements recited in claim 1 because Rick describes estimating parameters of signals, and does not relate to a channel established between a base station and a mobile communicator as recited in claim 1.

Rick relates only to parameter estimation:

"This invention relates to the field of parameter estimation using correlation analysis, and more specifically, to a parameter estimator employing correlation analysis for estimating parameter(s) of signals subject to distortions."²

The search window of Rick varies based on a priori information about a signal:

"For purposes of this disclosure, a dynamically variable search window is one where the size and/or placement of the window can vary responsive to a priori information regarding the signal, or can vary from signal to signal, or can vary from estimation attempt to estimation attempt, or can vary from default values, or any combination of the foregoing."

¹ Rick, Title.

² Rick, column 1, lines 10-15.

³ Rick, column 2, lines 33-40.

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All of this information in Rick exists before the signal is estimated. Rick describes estimating various parameters of a signal:

"Examples of the parameter(s) which may be estimated include, but are not limited to, time of arrival (TOA), root mean squared error (RMSE) for the TOA estimate, energy per chip (E_c) divided by interference noise density (I₀), etc."⁴

Rick attempts to estimate the parameters, and is not always successful:

"If the attempt is unsuccessful, the processor 204 may direct the R correlators 202(1), 202(2), ..., 202(R) to re-determine the correlation function F(PN, s) using a different search window size and/or placement."⁵

The applicant respectfully submits that Rick does not show "a search window size that adapts over time based on a changing channel condition between the base station and the mobile communicator" as is recited in claim 1.

Independent claim 12 recites a method comprising, among other elements, "adapting a size of the search window over time based on a changing channel condition between the base station and the mobile communicator." For the reasons stated above with respect to claim 1, the applicant respectfully submits that Rick does not show all of the elements recited in claim 12.

Independent claim 24 will be amended upon entry of the present amendment to include features recited in original claim 30. Original claim 30 was rejected under 35 USC § 103(a), and the applicant respectfully submits that amended independent claim 24, and claims 25-29 dependent thereon, are in condition for allowance for the reasons stated below.

The applicant respectfully submits that Rick does not show all of the elements recited in independent claims 1 and 12, and that claims 1 and 12 are in condition for allowance. Claims 4, 5, 7, 9-11, 13, and 15 are variously dependent on claims 1 and 12, and recite further features with respect to claims 1 and 12. For reasons analogous to those stated above, and the features in the claims, the applicant respectfully submits that Rick does not show all of the elements recited in claims 4, 5, 7, 9-11, 13, and 15, and that claims 4, 5, 7, 9-11, 13, and 15 are in condition for allowance.

⁴ Rick, column 2, lines 40-46.

⁵ Rick, column 6, lines 57-61.

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Rejection of Claims Under \$103

Claims 2-3, 16-17, 22-24, and 31 were rejected under 35 USC § 103(a) as being unpatentable over Rick in view of Bayley (U.S. 6,775,252 B1). The applicant respectfully traverses.

Bayley issued on 10 August 2004, which is after the filing date of the present application. The applicant does not admit that Bayley is prior art, and reserves the right to swear behind Bayley at a later date.

Independent claim 24 will be amended to include features recited in original claim 30, and claim 30 will be canceled, upon entry of the present amendment. Amended independent claim 24 is included in these remarks.

Bayley relates to a dynamic adjustment of search window size⁶ and describes adjusting the size of a search window based on the pilot signal strength of a preferred base station. The search window is then used to search for pilot signals from neighboring base stations.⁷ In Bayley, the search window is adjusted in response to a signal from a first base station, and is then used to search other base stations.⁸

The MPEP requires a suggestion for a rejection under 35 USC § 103, and the suggestion must be found in the prior art. ⁹ The MPEP cites *In re Lee*:

"discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references." 10

The Office Action states that:

"It would have been obvious...to combine Rick's adaptable search size window with Bayley's second larger window in order to dynamically response to a pilot signal strength, as taught by Bayley."

⁶ Bayley, Title.

⁷ Bayley, column 15, line 54 to column 16, line 21.

⁸ Bayley, Abstract.

⁹ MPEP 2143.

¹⁰ MPEP 2143.01, page 2100-130.

¹¹ Office action, page 7.

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The applicant respectfully submits that the quoted language does not point to a suggestion in the prior art as required and is itself not a suggestion for modifying Rick.

Furthermore, Rick and Bayley are adjusting a search window based on information from different signals. The search window of Rick varies based on *a priori* information about a signal, and the search window is used to search for that signal.¹² In Bayley, the search window is adjusted in response to a signal from a first base station, and is then used to search other base stations.¹³ One skilled in the art would not have been motivated to modify Rick based on the technique of Bayley because Rick and Bayley are after different results.

The applicant respectfully submits that a *prima facie* case of obviousness has not been established against claims 2-3, 16-17, 22-24, and 31, and that claims 2-3, 16-17, 22-24, and 31 are in condition for allowance.

Claims 6, 8, and 14 were rejected under 35 USC § 103(a) as being unpatentable over Rick in view of Terasawa (US 2002/0122396 A1). The applicant respectfully traverses.

Terasawa published on 5 September 2002, which is after the filing date of the present application. The applicant does not admit that Terasawa is prior art, and reserves the right to swear behind Terasawa at a later date.

Terasawa relates to handoff control in a CDMA system.¹⁴ Terasawa describes choosing different search windows to classify different base stations based on the relative level of synchronization.¹⁵

The Office Action states that:

"It would have been obvious...to combine Rick's adaptable search size window with Terasawa's infinite window size in order to encompass a worst case delay spread condition in the channel, as taught by Terasawa." ¹⁶

The applicant respectfully submits that this contention is not evidence of a suggestion for modifying Rick as the MPEP requires.

¹² Rick, Figure 3A.

¹³ Bayley, Abstract.

¹⁴ Terasawa, Title.

¹⁵ Terasawa, paragraph 0047.

¹⁶ Office action, page 11.

Furthermore, Rick and Terasawa are addressing different issues. The search window of Rick varies based on *a priori* information about a signal. The search window of Terasawa is selected from one of three predefined search windows based on the information the selection will convey.¹⁷ One skilled in the art would not have been motivated to modify Rick based on the technique of Terasawa because Rick and Terasawa are not related.

The applicant respectfully submits that a *prima facie* case of obviousness has not been established against claims 6, 8, and 14, and that claims 6, 8, and 14 are in condition for allowance.

Claims 18-21 were rejected under 35 USC § 103(a) as being unpatentable over Rick in view of Terasawa. The applicant respectfully traverses.

Claims 18-21 are dependent on claim 16, and recite further features with respect to claim 16. Claim 16 was rejected in view of Rick and Bayley, addressed above. The applicant respectfully submits that for the reasons stated above, and the features in the claims, a *prima* facie case of obviousness has not been established against claims 18-21, and that claims 18-21 are in condition for allowance.

The Office Action states that:

"It would have been obvious...to combine Rick's adaptable search size window with Terasawa's infinite window size in order to encompass a worst case delay spread condition in the channel, as taught by Terasawa." 18

The applicant respectfully submits that Terasawa does not mention "worst case delay spread" in the paragraph 47 cited in the Office Action and that there is no cited evidence of this suggestion for modifying Rick.

Furthermore, as discussed above, Rick and Terasawa are addressing different issues. One skilled in the art would not have been motivated to modify Rick based on the technique of Terasawa because Rick and Terasawa are not related.

The applicant respectfully submits that a *prima facie* case of obviousness has not been established against claims 18-21, and that claims 18-21 are in condition for allowance.

¹⁷ Terasawa, paragraph 0047.

¹⁸ Office action, page 13.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

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CONCLUSION

The applicant respectfully submits that all of the pending claims are in condition for allowance, and such action is earnestly solicited. The Examiner is invited to telephone the below-signed attorney at 612-373-6973 to discuss any questions which may remain with respect to the present application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date of May 2005

Rv

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 26th day of May, 2005.

Name

Signature